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A report was made on the design, goals, facilities, and personnel of an innovative elementary school planned to serve as a demonstration model. The education program is described in terms of objectives, program elements, personnel, organization, content, materials and equipment, methods, activities, and evaluation. Additional topics considered are: the students and area to be served, the nature of the school site, the cost of the project, instructional spaces, administrative and service facilities, food service facilities, custodial and engineering rooms, the faculty lounge, and site development. (MS)

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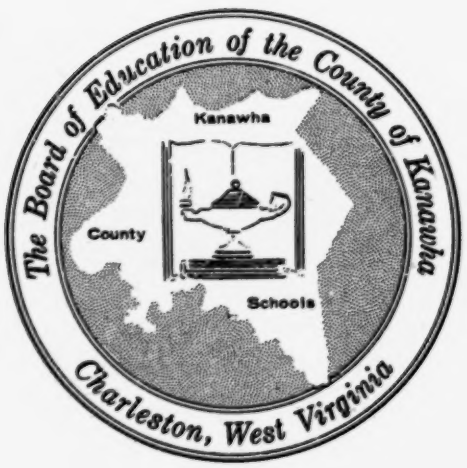
Educational Specifications

for

Piedmont Elementary School



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1968

KANAWHA COUNTY SCHOOLS
Charleston, West Virginia

PS001187

EDUCATIONAL SPECIFICATIONS
FOR
PIEDMONT ELEMENTARY SCHOOL

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PREFACE

The American public school has long been a symbol of the ideals of a free, self-governing people. One of the most important of these ideals is concerned with providing educational opportunity for all. The facts of twentieth century life, - a growing population, an increasingly complex society, the mounting store of knowledge, and new understandings about people and learning, have created some basic problems relating to the instructional program of the schools.

Attempts to solve these basic problems, to find new ways to educate students for today's world, have led to many educational changes. Many believe that change is the key to progress. Innovation, therefore, has become the central theme in current educational planning. According to the NEA, the country needs a thousand innovative schools, each with a corps of enthusiastic and interested teachers, supervisors, and administrators at work on projects they have selected and designed themselves.[1]

In the spring of 1967, after the voters of Kanawha County, West Virginia, had approved a twenty-three million dollar school improvement program, the Board of Education agreed to include two innovative schools, an elementary and a junior high, among new facilities to be built. This was a further step in the Kanawha County Schools policy of effecting quality control through "lighthouse learning centers" which began in the 1950's and had culminated with the opening of a major school development, George Washington High School, in September, 1964.

Plans were soon underway. The Elementary and Junior High Innovations Project Committees met for the first time on April 19, 1967. Following a modification of the planning procedures used with the George Washington Planning

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[1] National Education Association, Schools for the 60's (New York: McGraw-Hill Book Company, 1963), p. 118

Project, the two committees consisted of representative members from the Kanawha County central administrative staff, principals, and classroom teachers. Other participants were members of the West Virginia State Department of Education; representatives from The Ohio State University; Wood County, West Virginia, and the South-Western School District, Grove City, Ohio. Dr. Marion J. Conrad, Head, Administration and Facilities Unit, College of Education, The Ohio State University; and Mr. John F. Santrock, Associate Superintendent, Kanawha County Schools; served as project coordinators.

At this initial joint elementary-junior high meeting, a brief overview of the Innovations Project was presented. Four phases of the project were described:

1. Think Boldly or "Cloud Nine" - broadening educational horizons through research.
2. "Down to Earth" - determining objectives and program elements to be integrated into written statements establishing guidelines for implementation of the educational programs.
3. "Black and White" - writing educational specifications to be used by the architect in planning facilities to house the educational programs.
4. Parallel Phase - selecting and preparing instructional resources necessary to implement the new programs.

This document is the result of the activities through phase three. Further work will be necessary to develop the staff and materials required to bring this project to fruition.

SECTION I - GENERAL INFORMATION

A. Introduction

This document is written to be used as a guide in the preparation of drawings for the new Piedmont Elementary School to be constructed at Bradford and Quarrier Streets in Charleston, Kanawha County, West Virginia.

Special attention is directed to the publications: "Handbook on Planning School Facilities," Division of School Plant Planning, West Virginia Department of Education, Charleston, West Virginia; "Building Exit Codes, 1963", National Fire Protection Association, 60 Batterymarch Street, Boston, Massachusetts; and "Guide for Planning School Plants", National Council on Schoolhouse Construction, Michigan State University, East Lansing, Michigan, 1964. Architects will be expected to be thoroughly familiar with these publications.

The design of Piedmont Elementary School should include climate control, modifiability of interior spaces and maximum use of interior space for instructional purposes. Historically school buildings have become obsolete educationally before becoming obsolete structurally. With the advent of modern construction materials and construction techniques, it appears that increased modifiability can be achieved by utilizing modular construction. The architectural planning should concern itself with providing this modifiability without sacrificing safe and efficient functioning of the building.

The Piedmont Elementary School will be made available for a variety of community and extra-school uses. Such use will include recreation programs, community library services, program of remediation and enrichment in all instructional areas and for all age groups, and an extensive program of early childhood education encompassing the parents and the children from birth to school age.

Today's elementary school has an increasingly greater amount of equipment both stationary and movable which is placed at the disposal of teacher and pupils as tools to aid instruction and learning. As the amount and types of equipment used in the educational program increases, provision must be made within the school for the storage and use of this equipment at locations most convenient to the users as the need arises.

Due to the need for planning by both the teaching and learning teams, provision must be made for planning activities either within the learning center or adjacent to the learning center.

B. Background Information

1. The Educational Program

Piedmont Elementary School will be different because it is being created to perpetuate flexibility and change in an on-going society, to utilize new knowledge, understandings, and technological know-how. A "package of innovations" will incorporate changes in personnel practices, organizational patterns, curriculum content, methods and modes of learning, materials and equipment, and evaluation procedures. Piedmont Elementary School is being planned to provide the best possible learning opportunity for the boys and girls of Kanawha County. The underlying purpose for planning such an innovative school is the anticipation that it will serve as a demonstration school thereby helping to improve the educational program of all elementary schools in the County.

a. Objectives

The Innovative Committee agreed on the following specific goals for the instructional program of Piedmont Elementary School:

1) The overarching goal will be to encourage and maintain in children a love for learning. According to Mr. Walter F. Snyder, if the

Kanawha County School System is able to develop a total educational program in the new school which brings about a love for learning among even one-fourth of its children, "it might well be considered the most outstanding innovative-type elementary school in America."[2]

2) A second important goal will be to offer all children opportunity for successful educational experiences within a rich learning environment incorporating:

a) a diversity of resources (personnel, materials, equipment, facilities, etc.) - both school and community; and

b) a warm, supportive climate where children feel wanted, respected, and liked.[3]

3) A third important goal will be to humanize the program by means of an equal emphasis on the learner and the subject matter. This goal involves the concept of self-actualization, i.e., to become all that one can and deeply needs to become,[4] along with the recognition that intellectual competence is the cornerstone. The concern will be to develop persons willing and able to interact with the world in intelligent ways.[5]

4) An fourth important goal will be to strive for individualized instruction in order to:

a) promote the development of authentic citizenship and real, rather than verbal, philosophy; and

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[2]Walter F. Snyder, Superintendent, "Major Focus of Kanawha County's Innovative Elementary School," 1967

[3]Association for Supervision and Curriculum Development, Humanizing Education: The Person in the Process (Washington, D. C.: NEA, 1967) p. 21.

[4]Association for Supervision and Curriculum Development, Perceiving, Behaving, Becoming: A New Focus, Yearbook 1962 (Washington, D. C.: NEA, 1962), p. 34

[5]Humanizing Education, op. cit., p. vi.

b) serve the learning needs of each child within the realm of the personal powers:

(1) lesser learnings - the skill and fact areas, where the goal is continuous progress toward mastery, and

(2) larger learnings - where the goal is growth in power or process:

5) The fifth goal will be to provide for early childhood education through programs that will involve both parent and child in a variety of school and school related activities. The major thrust of this program will be to involve the three, four, and five-year olds in programs designed to make them more aware of the world around them. Parental involvement programs will be designed to make parents more aware of the activities of the school so that they may become a partner in the education of their children, and by this fact become better parents.

a) physical being - physical growth and development; health; experiencing the world through the body,

b) sensibility - responding fully to experience; being fully conscious of one's own existence,

c) empathy - love of life, wonder, respect; the desire to reach out, relate, identify with, to seek others,

d) invention - creativity, openness; the ability to shape and reshape experience, and

e) endurance - "to look life straight in the face -- and endure it"; to be.[6]

6) A sixth important goal will be to describe detailed goals for each major learning area in terms of overt behavior or an observable condition, the behavioral outcomes that are to be expected. The

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[6]Alexander Frazier, "Individualized Instruction" (mimeographed, 1967).

Russell Sage Foundation's Elementary School Objectives, 1953[7] and Mager's Preparing Instructional Objectives[8] will be used by the staff as a guide in developing detailed behavioral goals for the lesser and larger learnings.

The goals of Piedmont Elementary School are to be achieved by means of the various program elements which fit together as a consistent, innovative whole.

b. Program Elements

1) Personnel - The 24 professional persons allowed Piedmont Elementary School for Teams 1-6 include:

18 Teachers (1-28 teacher-pupil ratio)
1 Principal
1 Counselor
2 Resource Teachers (ESEA)
2 Special Education Teachers (1-15 ratio)

An assistant principal or a community coordinator may be allowed. A full-time school secretary is allowed. Six full-time paraprofessional persons are allowed through ESEA, and it is anticipated that other volunteer aides from the community will be available. In addition, six or more student teachers from local colleges are expected, possibly in cooperation with the M-STEP program.

2) Organization - Piedmont Elementary School will be organized on a cooperative teaching, continous progress basis. The expected 500-540 students, grades 1 through 6, are to be divided into six learning teams of approximately 85 students each according to year in school. Otis

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[7]Nolan C. Kearney, Elementary School Objectives (New York: Russell Sage Foundation, 1953).

[8]Robert F. Mager, Preparing Instructional Objectives (Palo Alto, California: Fearon Publishers, 1962).

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Quick Scoring I. Q. Test results indicate a probable 30 special education students (I. Q. range 70-50) within the 500. These children will be integrated with their age groups in the base learning teams since the total program is designed to meet the learning needs of all children. In addition, an early childhood education program which will involve school-parent-community is being planned.

The 24 professional persons shown in Chart 1, page 8 are to be organized as follows:

1 Principal - Responsible for leadership of the total educational program.

3 Lead Teachers - Responsible for coordinating the activities of two cooperative teaching items each, Teams 1-2, 3-4, and 5-6. Lead teachers will divide their time, teaching primarily with one team in the morning, the other in the afternoon. Lead teachers will be selected on the basis of predicted ability to bring several competencies into the classroom: supervision, curriculum development, and guidance.

12 Teachers (Generalists) - Major responsibility for unit work, language arts, and social studies. In addition, teachers of Teams 1 and 2 would have major responsibility for math and science since these younger children spend less time in the math-science learning center. Two teachers will be assigned to each learning team.

6 Specialists - Responsible for leadership in specific learning areas:

(1) Fine and Practical Arts
(2) Math-Science
(3) Music

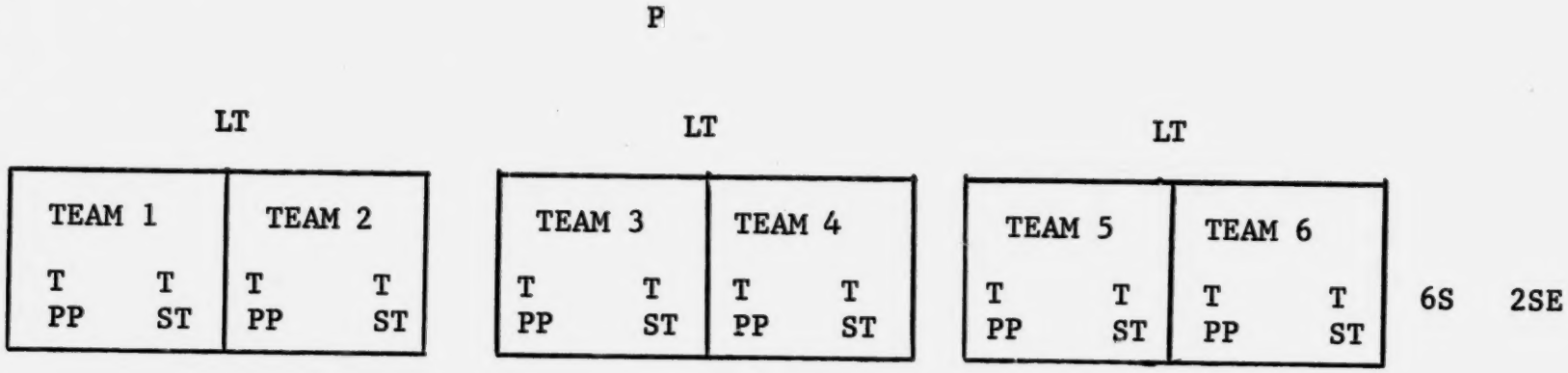
(4) Physical Education
(5) 2 Resource Teachers with specialties in reading and audio-visual media (Attached to Independent Learning Center

2 Special Education Teachers - Members of all teaching teams on a rotating basis.

The six paraprofessionals and six student teachers will be assigned on the basis of one paraprofessional and one student teacher to each basic teaching team. Basic teaching teams, therefore, consist of five adults for 85 students, this being a per pupil ratio of 1-17. (The composition of these teaching teams would at different times of the day be either lead teacher, teacher, paraprofessional, and student teacher; or specialist, teacher, paraprofessional, and student teacher.)

Other available personnel will be assigned as needed.

CHART 1 - ORGANIZATION OF COOPERATIVE TEACHING TEAMS



P = Principal
LT = Lead Teacher
T = Teacher (home base)
PP = Paraprofessional
ST = Student Teacher
S = Specialist, Teacher
SE = Special Education Teacher

3) Content - The curricular content for all areas will be within the realm of the larger and lesser learnings and will involve these subject areas:

Language Arts
Social Studies
Math
Science
Fine and Practical Arts
Music
Physical Education
Health

4) Materials and Equipment - A diversity of resources in both school and community will be utilized. In addition to the textbooks, dictionaries, encyclopedias, library books, and such which are furnished by the County, the school will need additional texts and library books on all levels as well as many programmed learning materials, tapes, film strips, and so forth. Needed equipment will include movie projectors, television sets, film strip projectors, overhead projectors, opaque projectors, tape recorders and earphones, typewriters, carts with wheels, and movable book shelves. Study carrels will be required as well as a variety of movable furniture.

It is expected that County supervisors and other resource persons will help compile detailed lists of specific equipment required to provide rich learning opportunities in all subject areas.

5) Methods - The base team teachers will promote continuous progress toward authentic citizenship in which there is a balance between individuality and conformity through the method of individualized instruction. In order to develop individuality and feelings of competence and to move toward self-actualization, children need to learn how to learn, to think independently, to make choices, to plan, and to evaluate. Much self-selection and self-direction by the learner, in ways that are

meaningful to him, is required. The teacher helps student to plan and evaluate, provides stimulating experiences, makes students aware of many alternatives in making decisions, and supplies a variety of appropriate materials. Requests of individuals and the teachers' own hypotheses as to what variety of materials and opportunities might be helpful are honored.[9]

Teachers will have information concerning the following for each of the 85 children in their charge:

1. General level of ability, talents, and interests
2. Inner motivation
3. Pupil's self-image and personality factors affecting learning
4. Various levels of achievement
5. Level of encouragement received from parents
6. Environmental factors affecting learning[10]

Once teachers have information concerning each of the foregoing factors affecting learning, they are faced with the all-important task of helping children select and use instructional materials and procedures which take these factors into consideration. For example, flexible grouping patterns will permit a child to work in small groups with any of the 85 students in his team who share his needs or interests, or to move to a different learning team. A child may receive individual help through programmed instructional materials or possibly computerized

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[9]Eleanore Sankowski, Director of Curriculum and In-Service Education, Letter dated June 5, 1968, to Members of Innovative Committee, Subject: "Individualizing Instruction."

[10]Walter F. Snyder, Superintendent, Letter dated May 17, 1968, to Members of Innovative Committee, Subject: "Individualization of Instruction."

programs which offer instant feedback. Moreover, paraprofessionals and volunteer aides will free the teachers from many duties allowing them more time for interaction with students both individually and in groups to facilitate the process of humanizing education to meet the learning needs of each individual.

It is believed that the unit method of teaching offers one of the best opportunities for individualizing instruction. Consequently, this method will be emphasized in the program of Piedmont Elementary School. In the unit method, student effort is directed toward concept development through the use of broad human themes, generalizations, and/or important problems. Students are involved in the selection and implementation of the units and are given free choice of the activities provided within the units. To be most effective and meaningful the topics chosen should be related to the children's daily life and contemporary events and issues. The unit approach is interdisciplinary since subjects are organized around a central theme and not taught in isolation. Individual interests and abilities are considered; skills are taught as needed. Both cooperation and independent study are encouraged.

The unit approach is a highly personal, sophisticated art form which incorporates many advantages. It provides (1) student participation; (2) understandings through the use of inquiry and discovery; (3) integrated, concomitant learnings; (4) opportunities for critical and creative thinking; (5) opportunity for social learnings; (6) functional use of subject matter; but especially, (7) it provides for individual differences. It is strongly believed that the unit approach holds the promise of achieving the goals of Piedmont Elementary School.

6) Activities - Content, materials, and methods lead to consideration of the activities of the school day.

Modes of Learning - A variety of learning experiences is considered to be desirable. Learning experiences may be classified by the nature of the activity into three types:

(1) Reaction learning activities - characterized largely by passive behavior on the part of students who listen and observe; adult activities are chiefly lecturing and demonstrating.

(2) Interaction learning activities - students and adults are active participants as both listeners and speakers in face-to-face communication.

(3) Action learning activities - here the students learn by doing; activities are mostly individualized or in small learning groups and are highly student directed; the adult's role is that of consultant and manager of the environment.

The program of Piedmont Elementary School will stress action learning individual and small ad hoc learning groups which form and re-form according to specific needs and interests within the basic team of 85 students. Interaction learning will also be stressed taking place in ad hoc learning groups. Reaction learning can take place on either an individual or group basis since group size has little effect on the quality of the learning experience if proper technological aids are used. For reaction learning, the entire team of 85 students may assemble for a common purpose such as the introduction of a learning unit. For the sharing of some creative activities, two learning teams of 170 students may come together.

During the school day, then, group sizes and membership will vary. It is expected that action and interaction learning activities such as unit project work will predominate and that reaction learning will be held to a minimum.

Length of school day - A six and a half hour school day is planned for students with hours from 8:30 A.M. to 3:00 P.M. An eight hour school day is suggested for teachers with hours from 8:15 A.M. to 4:15 P.M.

Team planning time - Planning time is essential to realizing the advantages of cooperative teaching and to the general success of the instructional program. Therefore, one hour and a half team planning time daily is provided during the suggested work day of eight hours. It is expected that teachers will recognize the importance of committing this time on a regular basis due to the necessity of group planning. An additional hour's planning time is provided daily within the students' school day during scheduled physical education and independent learning activities.

Time allotments - Suggested scheduling for the children in Teams 1 and 2 is as follows:

A.M.

8:30 - 1:00 Unit work, language arts, social studies, math, science, free play (Home Base)

12:15 - 12:45 Lunch

P.M.

1:00 - 3:00 Art, music, physical education (Special)

Teams 1 and 2 would spend four and a half hours per day in their home bases and two hours per day in special learning areas.

Suggested scheduling for the children in Teams 3-6 is as follows:

A.M. Teams 3 and 5	A.M. Teams 4 and 6
8:30 - 11:15 Unit work, language arts, social studies (Home Base)	8:30 - 11:45 (Special)
	11:45 - 12:15 Lunch
11:15 - 11:45 Lunch	

P.M.	P.M.
11:45 - 3:00 Math, science, art, music, physical education (Special)	12:15 - 3:00 (Home Base)

Teams 3 through 6 would spend three and a quarter hours per day in their home base and three and a quarter hours per day in special learning areas.

When a learning team works in a special learning area either within the school or the community, the students are to be accompanied by the basic teaching team members with the exception of the lead teacher who may be working with another learning team. The other member of the teaching team in the special learning centers will be a specialist who assumes a leadership of competence. At all times, however, the lead teacher coordinates the learning activities of the two basic teams for which he is responsible. The specialists plan with the base teachers regularly and follow the direction of unit work in progress as much as possible.

Unit work will take place largely in the home base learning center. Most of the time, with careful planning, unit work will carry over into the special learning centers thus taking a larger portion of the school day. While skills will be taught within a unit on a needs basis when possible and many aesthetic activities will also be incorporated into unit work, it is recognized that children need learning experiences within the disciplines themselves, and that all skills and aesthetics do not always fit easily into a unit. Successful unit work is difficult requiring much research and special study techniques on the part of staff and students alike. These skills must be learned and strengthened throughout the school year.

Lunch - A half-hour lunch period will be scheduled for learning teams 1-6. Children will eat with their respective base teams. Since lunch is considered part of the instructional program it is recommended that all children eat at school.

No self-determined play time is provided during the lunch period. The instructional program emphasizes activity and change of pace. Since one of the larger learnings is physical being, it is assumed that additional need for physical expression and free play will be accommodated on the all-weather playground and in the home base space at appropriate times.

7) Evaluation - Members of the teaching team and the students themselves will be involved in the evaluation process. Evaluation will be based upon appraisal of student growth in process and power according to specific behavioral goals for the several learning areas and will be in terms of continuous progress and competition with self in relation to potential. Growth in critical and creative thinking, communication skills, human realtionships, and valuing will be considered as well as study habits and extent of self-direction. Evaluation should take place constantly as team teachers and students engage in the diagnosing of learning needs and the selection of activities to promote continous progress.

Reporting of pupil progress will be by means of parent-teacher conferences held twice formally during the school year and informally as needed from time to time for individual students. Home visitation by teachers and parent participation in school activities will have an important part in the evaluation reporting process.

2. Area to be Served

The Piedmont Elementary School will serve an "In City" area now served by Kanawha and Mercer School. This area is undergoing projected change and is to undergo accelerated change in the immediate future. The area is at the present time, undergoing infringement by commercial development from the central business district to the West and from the capital complex to the East. In the near future the area will be bisected by an interstate highway. To offset this loss of residential housing, a public housing project is planned for the area and a private housing development is comtemplated. In the long range planning for the area, a major urban renewal project is planned which will remove a large number of sub standard homes. Although final plans are not complete, it must be assumed that some type of high density housing will be included in the redevelopment of the area.

3. Students to be Served

The two schools to be replaced now house 553 pupils in grades 1 through 6. It is estimated that 95 to 100 pupils will be relocated due to demolition in the interstate corridor. Based on current ratios, approximately 50 to 75 pupils may be added by the 195 bedroom public housing project in the area. Future change is difficult to predict due to the uncertainty of the scope and the timing of the plans for the redevelopment of the attendance area.

It may be assumed that the enrollment in 1970 in grades 1 through 6 may range from 475 to 525 with the lower figure more likely due to declining birth rates and the fact that clearance for the Interstate will precede major redevelopment of the area.

4. Nature of the Site

A site of approximately three acres will be made available for this project. The city block is shared by a junior high school, a hospital, a high rise senior citizens housing building and a church. The design of the building should consider the minimum site available.

All utilities are available at the site.

5. Summary of Facilities

Type of space	No. of spaces	Area Sq. Ft.	Page Reference
Pre-school Room	1	1750	
Primary Multipurpose Learning Center	2	2700	
Intermediate Multipurpose Learning Center	2	2700	
Fine and Practical Arts Learning Center	1	3200	
Mathematics-Science Learning Center	1	2500	
Independent Learning Center	1	2550	
Group Reaction Learning Center	1	1400	
Music Learning Center	1	1700	
Physical Education Learning Center	1	3200	
Community Learning Center	1	500	
		28,300	
Principals' office	1	125	
General office-waiting room	1	175	
Office supply-work room	1	175	
Conference room	1	400	
Health clinic	1	225	
Community Coordinators' office	1	120	
Kitchen	1	450	
Employees' dressing room	1	50	
Receiving and waste disposal area	1	as needed	
Storage room	1	125	
Mechanical equipment room	as needed	as needed	
Receiving, storage, and custodians work area	1	250	
Lawn tool equipment storage room	1	75	
Incinerator-waste room	as needed	as needed	
Utility closets	as needed	as needed	
Faculty lounge	1	200	
Adult toilets	2	as needed	
		2370	

6. Cost of the Project

The allocation for all costs related to this project is 1,214,620. The programmed area of this building is 29,970 square feet. Due to the nature of the instructional space it may be assumed that 87 per cent utilization will be achieved. The total area of the building, assuming the utilization factor is accurate, will be 34,450 square feet. At $19.00 per square foot the budget for this project will be as follows:

Construction cost 34,450 @ $19.00	654,550
Architects fees @5.88	38,487
Furniture and equipment @10%	65,455
Site acquisition (Estimated)	650,000
Total project cost	1,408,492
Allocation	1,214,620
	193,872

Due to the revision of plans which increases the size of this center and reduces the expansion required at Capitol Elementary School, it may be assumed that $110,000 may be assigned to this project from the Capitol project reducing the deficit to $83,872. Final determination of the project costs must be deferred until site acquisition figures are determined.

SECTION II - INSTRUCTIONAL SPACES

A. Preschool Room, one area, approximately 1750 square feet

1. Capacity:

   a. Forty to forty-five pupils
   b. Five to seven adults including two professional teachers, one para-professional, one student teacher, and from one to three aids

2. Location:

   a. Direct access to a playground area so located that play or physical education activities do not interfere with class or play activities of other groups
   b. Convenient access to the special service facilities

3. Activities:

   a. Reciting, discussing, and relating experiences (pupils may be seated at tables and/or on floor

   b. Pupils developing experience charts

   c. Dramatizing, singing, and engaging in puppetry

   d. Use of charts, globes, and models

   e. Pupils writing and/or drawing on chalkboard

   f. Pupils writing and drawing with crayons at tables

   g. Pupils painting with brush and tempera on easels

   h. Pupils fingerpainting on tables

   i. Pupils using clay, scissors, paste, etc.

   j. Pupils engaging in circle games, marching, and rhythmics

   k. Pupils engaging in rhythm band activities

   l. Listening to recordings and radio programs and viewing telecasts and projected materials

   m. Building with blocks

   n. Resting by class on floor

   o. Displaying of papers and resource materials

   p. Displaying of multi-dimensional objects

q. Using water and hand washing facilities

r. Collecting science specimens, doing experiments, growing plants indoors, and health demonstrations

s. Pupils drinking milk, eating snacks, and lunches

t. Administering minor first-aid

u. Providing special help for individual pupils

v. Staff holding conference with parents

w. Storing supplementary books, instructional supplies and materials, pupils' cumulative records, and pupils' and instructors' personal belongings

x. Pupils using restroom facilities

y. Building playhouses and playing house

4. Furniture and Equipment:

a. Four four-foot mobile chalkboard extending to within 18" of the floor

b. Six four-foot mobile tackboards

c. Sections of map or display rail on each wall

d. Eight linear feet of pegboard above the workcounter

e. Six six-place (28" x 72" x 23") and two four-place (28" x 60" x 23") pupil tables with 40 to 45 14" chairs

f. One 72" x 30" x 23" work table with impervious top with six 14" pupil chairs

g. One four-place wood-working bench, 24" high

h. Two 24" x 24" double easels

i. Drying racks for paintings

j. Two to three mobile project bins

k. Provision for convenience outlets, television terminals, and computer terminals throughout the space

l. Paper cutter and stand

m. Forty eight (48) linear feet of mobile book shelving with 10" adjustable shelves

n. Small pet or animal cages

o. Mobile storage cabinets for pupils' wraps and boots

p. Work counter 12' x 24" x 25" high, with sink with hot and cold water and drinking fountain and storage below

q. Small seed boxes, aquarium and terrarium

r. Two pupils' toilets with water closet and toilet tissue dispenser

s. Desks and chairs for two professional staff members, storage for personal belongings for seven staff members

t. Four drawers of legal-size filing space

u. Eight place conference table with eight adult size chairs

v. Provision for program chime, clock and sound system

w. Natural light control

5. The equipment and facilities should be located to provide the following areas:

a. Recitation and discussion center

b. A wet-working area for science and art

c. Open area for games and marching

d. Conference-planning-work area for the staff

e. A construction area for constructing playhouses and building with large building blocks

NOTE: All furniture and equipment shall be mobile in so far as practical design should provide additive alternates to expand this area by either one or two additional spaces or areas. The total pre-school area may be one space separated only by mobile furniture and equipment.

B. Primary multipurpose learning center; two areas, each approximately 2700 square feet

1. Capacity:

a. Eighty three (83) to eighty seven (87) pupils

b. Five to seven adults including a lead teacher, two teachers, one paraprofessional, one student teacher and one or two aids

2. Location:

   a. Convenient access to playground areas so located that play and physical education activities do not interfere with class activities or other groups

   b. Convenient access to the specialized learning centers

3. Activities:

   a. Individuals and small groups carrying out research utilizing reference materials stored in the area

   b. Individuals and small groups utilizing films, film strips, slides, telecasts, and other electronic instructional aids

   c. Pupils participating in ad hoc discussions with and without staff participation

   d. Staff members planning with individual pupils, small groups of pupils, and other staff members

   e. Pupils relating experiences

   f. Pupils developing experience charts

   g. Pupils using charts, maps, globes, and models

   h. Pupils and/or teachers writing or drawing on chalkboards

   i. Pupils writing or drawing with pencils or crayons at individual stations

   j. Individual and small groups dramatizing, singing, and engaging in puppetry

   k. Pupil or teacher demonstrating to small groups

   l. Pupils painting with brush and tempera on easels

   m. Finger painting on tables and desks

   n. Using scissors, paste, clay, etc.

   o. Displaying flat and multi-dimensional materials

   p. Using water and hand washing facilities

   q. Collecting and displaying science specimens, doing experiments, growing plants indoors and health demonstrations

   r. Staff and pupils eating lunch

s. Administering minor first-aid

t. Staff members conference with parents

u. Storing supplementary books, instructional supplies and materials, pupils' cumulative records, and pupils' and instructors' personal belongings

v. Pupils using restroom facilities

4. Furniture and Equipment

a. Six four-foot sections of mobile chalkboard

b. Four four-foot sections of mobile display board

c. Map and display rail on each wall

d. Eight linear feet of pegboard above a workcounter

e. Work stations for 87 pupils ranging in size from a 10 place conference table to individual carrels with 87 pupils chairs

f. Workcounter sink unit with two sinks with hot and cold water, a drinking fountain, electrical outlets, with tote tray storage for 87 pupils, and storage for paints and other instructional supplies

g. Six three-foot sections of mobile bookshelving with provision for writing surface attached to the rear of the shelf space

h. Two double easels

i. Approximately 16 linear feet of mobile units for the storage of the personal belongings of 87 pupils. Unit must have shelf space above and below for boots, hats, and other items or wearing apparel

j. Aquarium with provision for heating electrically

k. Terrarium

l. Provision for electrical convenience outlets, television terminal, and computer terminals throughout the area

m. Toilet facilities for each sex; 25 required by code

n. Mirrors and paper towel dispensers in the vicinity of each sink

o. Six teachers' desks, chairs, and files

p. Storage for personal belongings of fourteen (14) adults

q. Eight place conference table with eight adult chairs

r. Mobile storage units for instructional aids including rolled up maps and charts, and large sheets of paper (24" x 36")

s. Natural light control

t. Provision for program chime, sound and clock system

NOTE: The teacher planning area may be combined for the two primary multipurpose learning centers. There is no reason for these spaces to be separated from other compatible areas of the building.

C. Intermediate multipurpose learning center; two areas, each approximately 2700 square feet

1. Capacity:

a. Eight three (83) to eighty seven (87) pupils

b. Five to seven adults including a lead teacher, two teachers, one paraprofessional, one student teacher, and one or two aids

2. Location:

a. Convenient access to playground areas so located that play and physical education activities do not interfere with class activities of the other groups

b. Convenient access to the specialized learning centers

3. Activities:

a. Individuals and small groups carrying out research utilizing reference materials stored in the area

b. Individuals and small groups utilizing films, film strips, slides, telecasts and other electronic instructional aids

c. Pupils participating in ad hoc discussions with and without staff participation

d. Staff members planning with individual pupils, small groups of pupils, and with other staff members

e. Pupils relating experiences

f. Pupils developing experience charts

g. Pupils using maps, globes, and models

h. Pupils and/or teachers writing or drawing on chalkboards

i. Pupils writing or drawing with pencils or crayons at individual stations

j. Pupil or teacher demonstating to small groups

k. Displaying flat and multi-dimensional materials

l. Using water and hand washing facilities

m. Staff and pupils eating lunch

n. Administering minor first-aid

o. Staff members conferring with parents

p. Storing supplementary books, instructional supplies, and materials, pupils' cumulative records, and pupils' and instructors' personal belongings

q. Pupils using restroom facilities

4. Furniture and Equipment:

a. Six four-foot sections of mobile chalkboard

b. Four four-foot sections of mobile display board

c. Map and display rail on each wall

d. Eight linear feet of pegboard above work counter

e. Work stations for 87 pupils ranging in size from a ten place conference table to individual carrels with 87 pupil chairs

f. Work counter sink unit(s) with two sinks with hot and cold water, a drinking fountain, electrical outlets and tote tray storage for 175 pupils and storage for other instructional supplies
NOTE: It may be advisable to place this at two locations

g. Six three-foot sections of mobile book shelving with writing surface attached to the rear of the shelf space

h. Approximately 16 linear feet of mobile units for storage of the personal belongings of 87 pupils

i. Provision for electrical convenience outlets and computer terminals throughout the area

j. Toilet facilities for each sex as required by code

k. Mirrors and paper towel dispensers in the vicinity of each sink

l. Six teachers' desks, chairs, and files

m. Storage for the personal belongings of fourteen adults

n. Eight place conference table with eight adult chairs

o. Mobile storage units for instructional aids including rolled up maps, charts, gloves and models, and flat materials

p. Natural light control

q. Provision for program chime, sound, and clock system

NOTE: The teacher planning spaces may be combined in one center. It should be noted that each intermediate learning center will be the "home base" for two teams of 87 pupils, 5 professional teachers, two paraprofessionals, two student teachers, and the aides that will be assisting the two teams. Pupil storage for two of the pupil teams will be provided in the math-science and the fine and practical arts learning centers. There is no reason for these spaces to be separated from other compatible areas of the building.

D. Fine and Practical Arts Learning Center; one area, approximately 3200 square feet

1. Capacity:

a. Eighty three (83) to eighty seven (87) pupils in scheduled activities

b. Ten to fifteen pupils in unscheduled activities

c. Six to seven adults including three teachers, one para professional, one student teacher and one or two aids

2. Location:

a. Convenient access from the multipurpose learning laboratories

b. Direct access to an outdoor instructional area

3. Activities:

a. Individuals and small groups carrying out research utilizing reference materials stored in the classroom

b. Individuals and small groups utilizing films, film strips, slides, telecasts, and other electronic instructional aids

c. Pupils participating in ad hoc discussion with and without staff participation

d. Staff members planning with individual pupils, small groups of pupils, and other staff members

e. Pupils sketching, drawing and painting with water colors, tempera charcoal, pencils, pen, oils, or other art media

f. Pupils working with clay, including pottery and ceramics

g. Pupils sculpturing and constructing models and mobiles

h. Pupils making and using wood cuts for printing

i. Groups of pupils producing murals, large mosaics, or other large construction projects

j. Pupils fashioning items of wood, leather, metal, and plastics

k. Instructor demonstrating the preparation and serving of food to small groups

l. Pupils preparing and serving food

m. Instructor demonstrating the use of sewing machine, irons, washer, dryer, and other devices used in the construction and care of items made of cloth or similar fabrics to small groups

n. Pupils using sewing machines, irons, washer, dryer, and devices or other devices used in the construction and care of items made of cloth or similar fabrics

o. Pupils participating in child care

p. Pupils participating in activities related to the care of the home

q. Pupils planning construction projects

r. Pupils learning the use and care of hand tools

s. Pupils learning the rudiments of electricity

t. Storing a wide variety of materials used in arts, crafts, and homemaking

u. Storaging for reference materials including books, records, tapes, films, film strips, and slides

v. Storing pupils' and instructors' personal belongings

w. Pupils using restroom facilities

4. Furniture and Equipment:

a. Four four-foot sections of mobile chalkboard

b. Four four-foot sections of mobile tackboard

c. Map and display rail on each wall

d. Six linear feet of pegboard in crafts area for use in storing hand tools

e. Display area for three dimensional objects

f. Thirty linear feet of work counter surface with two sinks and with storage below

g. Three four-place wood working benches with storage for a wide variety of hand tools

h. Three unit kitchens each with double sinks, range, and kitchen type cabinetry for storage of cooking utensils and one refrigerator

i. Three four-place refectory tables

j. Six two-place cutting tables with one sewing machine in each table and with chairs

k. Two irons and ironing boards

l. Electric washer and dryer

m. One six-foot work counter with deep laundry sink and with storage for laundry supplies below

n. Twenty pupil positions with benches for art activities

o. Tables and chairs for 35 pupils ranging in size from an eight place conference table to individual carrels for research activities

p. Five mobile combination book shelf-carrel units with five chairs

q. Clay storage bin

r. One kiln

s. Four studio easels

t. Damp cabinet

u. Drying cabinet

v. Approximately 16 linear feet of mobile storage for the personal belongings of 87 pupils

w. One teachers desk, chair and file cabinet

x. Storage for personal belongings of two to three adults

y. Program bell, sound and clock system

z. Provision for electrical convenience outlets, television terminals,

and computer terminals throughout the research area

aa. Toilet rooms for each sex

5. Furniture and equipment shall be located to provide the following areas:

a. Homemaking area

b. Crafts construction area

c. Art area

d. Individual and small group research and planning

e. Teachers' planning, work and storage area

f. Wet area for work with clay
NOTE: There is no reason for separating this area from other compatible areas of the building

E. Mathematics-Science Learning Center; one area, approximately 2500 square feet

1. Capacity:

a. Eighty three (83) to eighty seven (87) pupils in scheduled activities

b. Ten to fifteen pupils in unscheduled activities

c. Six to seven adults including three teachers, one paraprofessional, one student teacher, and one or two aids

2. Location:

a. Convenient access to the independent learning center

b. Convenient access from the multipurpose learning centers

3. Activities:

a. Pupils carrying out science experiments using water, heat, electricity, and apparatus

b. Pupils using adding machines, calculators, and other electronic instructional aids

c. Pupils writing or drawing at desks or tables

d. Small groups of pupils carrying out research projects or engaging in ad hoc discussions

e. Pupils planning and constructing models and measuring instruments

f. Pupils planning and constructing models to demonstrate scientific principles

g. Staff members assisting individual and small groups of pupils

h. Storing a wide variety of instructional aids including books, filmstrips, tapes, records, and other electronic instructional aids

i. Staff members storing personal belongings

j. Staff members planning activities

k. Storing a wide variety of apparatus used in science experiments

l. Growing plants

m. Keeping live land, aquatic, and amphibian animals

n. Pupils using restroom facilities

4. Furniture and Equipment:

a. Ten pupil stations with water, electricity, and apparatus available to each of station and with storage below

b. Ten pupil stations with electricty and apparatus stands available to each pair of stations and with storage below

c. Thirty individual and group positions wired for use of electronic teaching aids including two adding machines and two calculator positions

d. Two two-pupil wood working benches for constructing models and measuring instruments with storage for hand tools in drawers

e. Tables and chairs ranging in size from eight pupil tables to individual carrels for fifty pupils

f. Six four-foot sections of mobile chalkboard one lined with polar coordinates and one lined with rectangular coordinates -- each chalkboard shall be metallic base

g. Four four-foot sections of mobile tackboard

h. Approximately 16 linear feet of mobile storage for the personal belongings of 87 pupils

i. One teacher's desk, chair, and file cabinet

j. Storage for personal belongings of two to three adults

k. Terrarium

l. Aquarium

m. Five mobile combination book shelf-carrel units with five chairs

n. Provision for program chime, sound, and clock system

o. Natural light control

p. Toilet rooms for each sex

5. Furniture and equipment shall be arranged to provide the following areas:

a. Wet science area

b. Dry science area

c. Mathematics area

d. General research area

e. Construction area

f. Staff work and planning area

NOTE: There is no reason why this area should be separated from other compatible areas of the building

F. Independent Learning Center; area, approximately 2550 square feet

1. Capacity: Eighty five (85) pupils engaging in independent study

a. Forty-four pupils in scheduled independent study

b. Forty pupils in unscheduled independent study

c. Three to four adults including two professional staff members and one or two aids

2. Location:

a. Convenient access from the mathematics-science and the multipurpose learning centers

b. Convenient access from a building entrance

3. Activities:

a. Pupils selecting and using instructional aids including books, film strips, tapes, records, and other electronic instructional aids stored in the center

b. Pupils working individually and in small groups on research projects

c. Displaying of books, book jackets, and other materials to heighten the interest of pupils in the center

d. Pupils engaging in ad hoc discussions

e. Pupils using restroom facilities

4. Furniture and Equipment:

a. 500 linear feet of book shelving with adjustable shelves 8" to 12" deep -- shelves not more than 5'6" high or more than 3' vertical up-rights. One shelving area requires 14" to 16" height for picture books -- vertical divisions are required every 8" to 10" in this area

b. Magazine shelves for twenty titles, varying in size from Reader's Digest to Life

c. Eight (8) linear feet of tackboard, 48" wide

d. Display for three-dimensional objects

e. Tables and chairs for 85 pupils ranging in size from eight-place conference tables to individual carrels

f. Charge-out desk with ten catalog trays

g. A display rack for three newspapers

h. A dictionary and an atlas stand

i. A work counter with sink and hot and cold water -- six feet long with storage below

j. Two book trucks

k. Four legal-size drawers of filing space

l. Special storage facilities for maps, charts, film strips, slides, recordings, and tapes

m. Provision for using film strip previewers, tape recorders, controlled readers, etc. within the I.L.C. at any location

n. Desks, chairs, and files for two professional staff members

o. Storage for the personal belongings of three to four adults

p. Provision for program chime, clock and sound system

q. Natural light control

r. Toilet rooms for each sex

5. The equipment and facilities should be located to provide the following areas:

a. Browsing area

b. Individual and group research area

c. Area for remedial and developmental reading activities

d. Staff work-planning area

e. Storage area for audio-visual equipment on mobile stands and on shelves

G. Group Reaction Learning Center; area, approximately 1400 square feet

1. Capacity: Ninety to one hundred pupils or adults viewing stage and lecture demonstration

2. Location:

a. If sound problems can be overcome, this space may be located adjacent to the music learning center so that a larger assembly area may be created by using operable walls

b. Convenient access from the multipurpose learning centers

c. Convenient access from a building entrance

d. Access to the stage area without passing through the seating area

3. Activities:

a. Viewing films and television and listening to lectures supplemented by visual projections

b. Community use for meeting, etc.

c. Staging skits, plays, musical productions, and panel discussions

d. Storing props, projection equipment, and television sets

4. Furniture and Equipment:

a. Projection screen located to provide optimum viewing conditions

b. Tiered floor with carpet for seating

c. Electrical convenience outlets located at all projection positions

d. Microphone outlet connected to the building wide sound system with control capability in the back of stage area

e. Television outlets located so as to provide ease of viewing from all positions with this facility

f. Program chime, sound system and clock system

g. Lighting system designed for variable lighting levels and special lighting effects in the stage area

5. The design of this space should provide:

a. A staging area

b. A seating area

c. A storage area

H. Music Learning Center; area, approximately 1700 square feet

1. Capacity:

a. Large rehearsal area; 83 to 87 pupils

b. Small ensemble area; 15 to 20 pupils

c. Practice rooms; 1 to 3 pupils

d. Research and planning area

2. Location:

a. If sound problem can be overcome, this area may be located adjacent to the group reaction learning center so that a larger assembly area may be created by utilizing operable walls

b. If #1 is not economically or accoustically feasible, locate this space away from the quiet area of the building

3. Activities:

a. Large group musical activities ranging from participation in vocal and/or instrumental music, through listening to recorded music, to discussion of musical compositions in small groups

b. Storing music instruments

c. Small groups participating in listening, vocal, and instrumental music activities

d. Individual, duets, and trios using small practice rooms

e. Staff planning-working and storing personal belongings

f. Pupils using restroom facilities

4. Furniture and Equipment:

a. Chairs for 100 pupils

b. Desk, chair, and storage for the personal belongings of one professional staff member

c. Storage for the personal belongings of two to three adults

d. Portable music stands

e. Storage for a wide variety of musical instruments

f. Conference table with eight chairs

g. Book shelving in planning area

h. Toilet rooms for each sex

NOTE: Due to the nature of this activity, this area will of necessity be divided into one room for large group work, one room for ensemble work, two rooms for individual practice, and one room for research and planning.

I. Physical Education Learning Center; area, approximately 3200 square feet

1. Capacity: Fifty (50) pupils

2. Location:

a. Away from the quiet area of the building

b. Adjacent to and direct access to a covered outdoor play area

3. Activities:

a. Rhythm activities

b. Tumbling and gymnastics

c. Circle games

d. Relays

e. Kickball

f. Volleyball and badminton

g. Rope climbing

h. Storing a wide variety of physical education apparatus, mats equipment, and chairs

i. Shuffleboard

j. Paddle tennis

k. Large group assembly

l. Storing personal belongings of two to three staff members

m. Storing instructional materials

n. Staff planning with pupils

o. Pupils doing research and participating in ad hoc discussion activities

p. Pupils using restroom facilities

4. Furniture and Equipment:

a. At least two electrical convenience outlets in each wall

b. Wall and ceiling devices for attaching nets, climbing ropes, wall mounted vertical ladders, and other apparatus

c. Provision for program bell, sound and clock system

d. Storage for mats, apparatus, bats, balls, and rackets in a space separate from the play area

e. Chair storage

f. Desk, chair, and file for one instructor

g. Storage for the personal belongings of three staff members

h. Conference table with eight chairs

i. Toilet room for each sex

J. Community Learning Center; area, approximately 500 square feet

1. Capacity: Ten to fifteen persons including babes in arms

2. Location:

a. Convenient access from a building entrance

b. Convenient access from the administrative suite

c. Convenient access to the adult toilets

3. Activities:

a. Counseling with parents concerning child care

b. Community groups discussing common problems

c. Caring for small children

d. Small community groups having light snacks

e. Parents receiving instruction in the care of the home, buying practices, etc.

f. Parents selecting and reading magazines and pamphlets

4. Furniture and Equipment:

a. Tables and chairs for 15 persons

b. Playpen for small fry

c. Pullman kitchen

d. Electrical convenience outlets in each wall

e. Display rack for magazines and pamphlets

f. Four to five comfortable chairs situated for reading

g. Six linear feet of tackboard

h. Six linear feet of chalkboard

i. Projection screen

SECTION III - ADMINISTRATIVE AND SERVICE FACILITIES

A. Administrative Suite

1. Principal's office, area, approximately 125 square feet

a. Location:

1) Direct access from the general office-waiting room

2) Convenient access from building entrance

b. Activities:

1) Individual study and planning by the principal

2) General operation of the program of the total school

3) Conferring the individuals and small groups

4) Storage of outer garments and other personal belongings

c. Furniture and Equipment:

1) Principal's desk and chair

2) Three adult-size chairs

3) Telephone with intercommunication with general office

4) Ten (10) linear feet of open bookshelving

5) Four drawers of legal-size filing space

6) Costumer

7) Utility table, 23" x 40"

8) Tackboard, 4' x 4'

2. General office-waiting room, area, approximately 175 square feet

a. Location:

1) Direct access to the principal's office

2) Easily accessible to pupils, teachers, and public

3) Centrally located in the building but convenient to the building entrance

4) Direct access to the office work room

5) Direct or convenient access to the health suite

b. Activities:

1) Handling internal and external communications

2) Processing pupils

3) Conferring with staff, pupils, parents, and visitors

4) Storing confidential documents

5) Typewriting letters, reports, memoranda

6) Filing letters, reports, permanent records

7) Receiving and routing mail

c. Furniture and Equipment:

1) Mail boxes: Minimum, 30 boxes, 4" x 10" x 12" with table under for packages

2) Six (6) linear feet of tackboard space

3) Telephone with intercommunication with principal's office, clinic, and community coordinators' office

4) Three to four comfortable chairs in the waiting room area

5) Magazine table

6) Desk and chair for secretary (with provision for in-the-desk typewriter)

7) Fire-proof record file for 5" x 8" cards

8) Coat rack and shelf for hats, 6 place valet type

9) Electrical outlets on four walls and in-the-floor outlet for typewriter

10) Eight (8) drawers of legal-size filing space

11) Utility table, 23" x 40"

12) Program, clock and sound system

3. Office supply - work room, area approximately 175 square feet

a. Location: Direct access from general office

b. Activities:

1) Storage of office supplies

2) Mimeographing and spirit process duplicating of instructional materials and memoranda

3) Distribution of instructional supplies and equipment

c. Furniture and Equipment:

1) Maximum amount of work surface space at the perimeter of the room including a sink with hot and cold water (the counter should be designed to accommodate a mimeograph machine)

2) Electrical outlets over the workcounter

3) Maximum amount of open and closed storage above and below the workcounter

4. Conference, small group, and individual instruction room, area, approximately 400 square feet

a. Location:

1) Convenient access to other spaces in the general office area

2) Convenient access to the instructional areas

b. Activities:

1) Staging area for visiting groups

2) Small group reading and remedial instruction

3) Small group testing by the pupil services staff

4) Conferences by school staff and adult groups on a scheduled basis

c. Furniture and Equipment:

1) Six (6) linear feet of chalkboard, 48" wide with map and display rail over

2) Six (6) linear feet of tackboard

3) Conference table to accommodate from ten to twelve persons

4) Twelve 17" chairs

5) Twelve upholstered folding chairs with writing surface

6) Electrical convenience outlets

7) Twenty (2) linear feet of book shelving

8) Positive ventilation

9) Provision for program chime, clock, and sound system

5. Health clinic, area, approximately 225 square feet

a. Location:

1) Convenient access from building proper

2) Convenient access from the general office to permit supervision of room by secretary

b. Activities:

1) Temporary isolation of pupils who are ill

2) Administering first-aid

3) Storing first-aid supplies

4) Giving hearing tests, vision tests, innoculations, etc.

5) Pupil showering - individual

c. Equipment and Facilities:

1) Water closet and shower cubicle

2) Six (6) linear feet of workcounter sink unit with hot and cold water and storage above and below

3) Storage for nurse's personal belongings

4) Six (6) linear feet of tackboard

5) Scales

6) Two cots--division between by curtains or folding screen

7) Nurse's desk and chair

8) Two visitors' chairs

9) Telephone with intercommunication with general office

10) Electric eye chart

11) Electrical outlets

12) Provision for program chime, clock and sound system

6. Community Coordinator's Office, area, approximately 120 square feet

a. Location:

1) Convenient access from the building proper

2) Convenient access to the conference room

b. Activities:

1) Coordinator counseling with parents

2) Coordinator-administering community involvement programs

c. Furniture and Equipment:

1) Executive type desk and chair

2) Two visitors' chairs

3) Two electrical outlets

4) Telephone with intercommunication with general office

5) Four drawers of legal-size filing space

6) Ten (10) linear feet of open bookshelving

7) Storage for coordinators' personal belongings

8) Provision for program chime and sound system

B. Food Service Facilities

1. Kitchen, area, approximately 450 square feet

a. Location:

1) Convenient access to multipurpose learning centers

2) Direct access from loading dock

b. Activities:

1) Preparing Type A hot lunches

2) Loading serving carts for serving students in multipurpose learning centers

3) Receiving, scraping, and washing eating utensils

4) Baking

5) Cleaning vegetables

6) Cleaning and sanitizing pots and pans

7) Disposing of wet garbage

8) Cooking meats and vegetables

c. Furniture and Equipment:

1) Vegetable sink, 24" x 24" with drain board

2) Three compartment pot and pan sink, 24" x 7' with drain boards

3) Hand lavatory

4) Soiled dish table, disposal, pre-rinse, dishwasher, and clean dish table with hot water booster

5) Forty cubic foot stainless steel reach-in refrigerator

6) Stainless steel work table, 6' x 30", with rack above and below

7) Stainless steel bakers table with cove edges, 6' x 30", with drawers

8) Range hood and exhaust system

9) Stack oven

10) Ten burner range

11) Heavy duty mixer on stand

12) Vegetable peeler

13) Proof cabinet

d. Equipment should be located so as to provide the following areas:

1) Vegetable preparation area

2) Baking area

3) Cooking area

4) Soiled dish and disposal area

2. Employees' dressing room, one room, 50 square feet

a. Location: Convenient but not direct access from the kitchen

b. Activities: Food service employees dressing, using hand washing facilities and toilet facilities

c. Equipment and facilities:

1) Lavatory

2) Water closet

3) Lockers - Three to four use by food service personnel

4) Sealed waste container

5) Mirror

6) Paper towel dispenser

7) Positive ventilation

3. Receiving and waste disposal area, area as needed

a. Location:

1) Direct access from service drive

2) Direct access to kitchen

b. Activities:

1) Receiving food products from trucks

2) Disposing of waste

3) Cleaning garbage cans

c. Equipment and facilities:

1) Floor drain

2) Frost proof hose bib with hot and cold water

3) Garbage cans or garbage containers

4) Screen wall or enclosure to conceal area

4. Storage room, area, approximately 125 square feet

a. Location:

1) Convenient access from the kitchen

2) Convenient access from the receiving area

b. Activities:

1) Receiving and storing food products on shelves and in bins on platforms

2) Storing frozen food

c. Furniture and Equipment:

1) Maximum shelving, 18" to 24" deep, with space under for large containers for dry foods

2) Thirty cubic foot reach-in frozen food cabinet

3) Adequate ventilation to maintain moderate temperature

NOTE: One 6' area of shelving should start 30" - 36" above the floor to provide bulk storage under shelving. Platforms rather than low shelves are preferable for ease of cleaning.

C. Custodial and engineering rooms

1. Mechanical equipment room; area and size as needed

NOTE: New directions in heating and cooling school structures requires that no direction should be given the mechanical engineers in this area, although consideration should be given to the roof top systems due to ease of expansibility and perhaps to the on site generation of power.

2. Receiving, storage, and custodian's work room, 250 square feet

a. Location:

1) Direct access from service drive

2) Convenient access to other areas of the building

b. Activities:

1) Receiving, storing and dispersing school supplies

2) Custodian making repairs on small items of equipment

3) Storing wet-dry vacuum cleaners, scrubber-buffer etc.

c. Furniture and Equipment:

1) Two hundred (200) linear feet of shelving, 24" in depth, with space for storing floor cleaning equipment under

2) A work bench with vise and appropriate hand tools for making minor repairs about the building

3) Provision for sound system

4) Positive ventilation

3. Lawn tool equipment storage room, one room, approximately 75 square feet

a. Location: An integral part of the building structure with access only from the out-of-doors

b. Activities: Storage of wheelbarrow, power mower, shovel, rake, etc.

c. Furniture and Equipment: Fire-proof storage for gasoline

4. Incinerator - waste room, area as needed

NOTE: An area for disposing of waste large enough to store trash so that burning will be necessary only once a day should be provided. Utilize gas fired or electric incinerator.

5. Utility closets, as needed

a. Location: At least one utility closet on each level

b. Activities:

1) Storage of various custodial supplies, mops and brooms, using hot and cold water

2) Filling and emptying mop buckets

c. Equipment and facilities:

1) Ten (10) linear feet of shelving for various custodial supplies

2) Racks for hand mops and brooms

3) Floor sink with hot and cold water to be used for filling and emptying mop buckets

4) Positive ventilation

D. Miscellaneous Facilities

1. Faculty lounge, area, approximately 200 square feet

a. Capacity: six to eight teachers

b. Location:

1) In the special service area of the building

2) Convenient access to the adult toilets

3) Away from the path of high pupil traffic

c. Activities:

1) Faculty members relaxing and conversing

2) Faculty members eating snacks

d. Furniture and Equipment:

1) Decorative furniture for seating six to eight faculty members

2) Coffee table and end tables

3) Lamps

4) Electrical outlets spaced to provide satisfactory arrangement of lamps

5) Positive ventilation

6) Provision for sound, clock, and program chime

2. Adult toilets, two rooms, area as needed

a. Location:

1) Convenient access from assembly areas

2) Convenient access from the faculty lounge

b. Activities:

1) Adults using toilet facilities

c. Furniture and Equipment:

1) Ladies' toilet room

a) Two water closets

b) One lavatory

c) Paper towel and two toilet tissue dispensers

d) Sanitary napkin dispenser

e) Mirror with shelf under

2) Mens' toilet room

a) One water closet

b) One urinal

c) One paper towel and one toilet tissue dispenser

d) Mirror with shelf under

NOTE: Facilities should be oriented so that visual and sound isolation is maximum. These rooms must have positive ventilation.

E. Miscellaneous Requirements

1. Drinking fountains

a. Location:

1) At each sink located in the various learning centers

2) In the immediate vicinity of the assembly areas -- provide electrical outlet at this (these) fountain(s) for possible future installation of a water cooler

3) An outdoor stainless steel fountain in the vicinity of the hard surface play area

2. Provision for cleaning shoes and boots: At each entrance to the building, provide a surface that will enable pupils and patrons to remove abrasive materials from their footwear. Inside the entrance a runner of highly absorbent and easily cleaned materials for removal of moisture should be provided.

3. Transmission of sound from area to area within the building should be reduced to a minimum. This would include sound transmission from space to space, and from the assembly areas to the more quiet areas of the building.

4. Electronic teaching aids: Faculty members and pupils are making increasing use of electronic or electrically operated teaching and learning aids. Care should be taken to provide facilities that will accommodate such items of equipment as:

   a) Overhead projectors

   b) Opaque projectors

   c) Film strip projectors

   d) Movie projectors

   e) Tape recorders

   f) Radio

   g) Record players

   h) Television

   i) Teaching machines of various types

   j) Computer assisted instructional equipment

   Special consideration should be given to the following to allow satisfactory use of electronic devices:

   a) Natural light control

   b) Artificial light control

   c) Projection screens should be located so that vision above an overhead projector may be maintained without distortion of the image

   d) Electrical outlets located so that a variety of electronic or electrically operated devices may be used simultaneously at various locations within each space

   e) Conduit systems that will provide for central sound system, central clock and program chime system, television antenna system, electrical convenience outlets and computer terminals at appropriate locations. Careful analysis of the requirements of the various circuits required

should be made to determine the most efficient conduit system.

f) The central sound system console should be located in the general office with microphone outlets and control capacity located in the assembly areas to be used for group presentations.

5. Mechanical zones: Provision should be made for heating and/or cooling the assembly areas, independent learning center, and the administrative spaces independently of other spaces within the building.

6. Program clock: Provide a program clock in the general office with connection to clocks in each instructional space. Chimes should be provided in the quiet areas of the building with gongs provided in the physical education learning center and outside the building.

7. Fire alarm system: An electrically supervised fire alarm system shall be provided with sending stations located at each exit from the building.

8. Provision for cleaning equipment: Provide electrical convenience outlets in the corridor for use of cleaning equipment requiring 115 volt electrical current.

9. Outdoor water outlets: Provide hose bibs at 150' intervals on the outside walls of the building. At the location nearest to the hard surface play area provide, in conjunction with the hose bib, a stainless steel drinking fountain.

10. Visual environment: The visual environment within an elementary school is of such a complex nature that the architect is referred to American Standard Guide for School Lighting, American Standards Association, Illiminating Engineering Society, 345 E. 47th Street, New York 17, 1962; and the Guide for Planning School Plants, National Council on Schoolhouse Construction, Michigan State University, East Lansing, 1964.

11. Exterior lighting: Each major entrance to the building should be

provided with illumination with a control switch located inside the entrance. Security lighting should be provided so that the building perimeter is bathed in light during the hours of darkness. These lights may be controlled by light sensitive cells.

12. School name and name plaque: Provide for prominent display of the school name at a location visible from the primary access to the building. Provide for a name plaque located inside the main entrance of the building with the school name, the names of the members of the Board of Education, the Secretary of the Board of Education, architects, contractor, and educational consultant.

13. Modifiability of interior spaces: The only certainty in educational planning is that changes in the educational program and in the methods of presenting the program to the pupils will occur. This reality with which we must contend indicates building structures with built-in capability for change not only in the function to be carried out in a space but also in the form of the space. Special consideration should be given to the ventilation, lighting, and wall systems in new structures so that changes may occur with a minimum effort and expenditure. Such design would require special sonic, visual, and thermal treatment to provide a satisfactory learning environment.

14. Flagpole: Provide a flagpole for the display of the United States and West Virginia flags. Pole should be sized in relation to the scale of the building.

F. Site Development

Several factors must be considered in the development of the school site:

1. Location of the building on the site
2. Incidental space necessary to service and landscape the facilities

3. Covered outdoor instructional and recreational areas

Characteristics of a good site plan include:*

1. Provision for maximum safety of pupils and others who use the school

   Driveways should be located so as to eliminate or minimize traffic hazards. Play areas should be located so as to avoid the possibility of collision among players in different activities.

2. Economy of space usage

   Duplicate use of some areas is possible if arrangement of facilities is suitable.

3. Functional relationship among facilities and space areas

   Outdoor areas should be located so that they are easily accessible from corresponding indoor areas.

4. Minimum development expense

   Included here are such items as grading, filing, sidewalk construction, erection of retaining walls, drainage, etc.

5. Flexibility to meet changing needs

   Educational and recreational activities of the school may change. Therefore, the site plan should be flexible enough to permit rearrangement of the space areas.

6. Expansibility to serve a larger school

   Should the school need to be added to at some later date, provision should be made for such expansion without having to change the site plan radically.

*Sumption, Merle R. and Jack L. Landes, Planning Functional School Buildings, Harper & Brothers, Publishers, New York, 1957, Page 176.

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7. Attractiveness in overall appearance

A fine building fitted into the contours of an attractively developed site presents a picture pleasing to the eye and gratifying to the aesthetic senses.

After the site has been selected, it is the responsibility of the architect to locate the building on the site. The contour and the size of the site will largely determine the location and the type of building to be built. However, the architect should give major consideration to a building location that allows ample space suitable for play area. In fact, where it is a choice between building location and play space for the level land available, play space should be given priority.

In determining the location of the building on the site, consideration should be given to provide for the following:

1. Outdoor activity areas for primary grades

These should be adjacent to or quite near the school building with no intervening driveways. The area should be comparatively level and secluded from the game areas of the older pupils. A small part of the area should be hard surfaced for use in wet weather. Parallel ladders, climbing bars, jungle gyms, and other such playground equipment should be located near the building in this area.

2. Intermediate grades

There should be three divisions in this area: One for softball, one for informal games which require no special facilities, and a 70' x 120' court for games such as basketball, tennis, and volleyball. These areas should be sufficiently distant from the play areas of smaller children as to avoid collisions.

Other areas which should be provided on school sites include: Parking area, for the cars of the total staff plus five additional cars, bicycle parking area, one-way access drive -- including off-street bus loading, sidewalks, lawns, trees and shrubs.

Of all the elements in the landscape, trees are most important. Deciduous trees are generally preferred. A few trees located reasonably close to the building are valuable for the play areas of smaller children, but not in open game areas.

Next to trees, lawns are the second major feature of any landscape design. However, if play area is limited, it is not recommended that space be provided for lawn at the expense of play area. Lawns make excellent dust filters, air conditioners, and are the world's best glare reducers.

Shrubbery should not be used as "fountain planting" around a building proper. Roof overhangs prevent them from getting enough water, and they often grow so big as to interfere with window washing, painting, and caulking. There are, however, good uses for massed shrubs planted along a dangerous street, or to prevent children from dashing into traffic at unpoliced points. Shrubs should be selected for hardiness, long life, and easy maintenance.

Walks and paths should be placed where children will use them. Pedestrian traffic, like water, takes the line of least resistance. On a flat area it will take a diagonal shortcut rather than a right angle turn. On a steep slope it will usually work out a zigzag ascent or descent. It might be advisable to put the sidewalks in after the children have made paths where <u>they</u> want the walks to be